

University of Rochester

Project Name ...

Self-determination, Smoking, Diet and Health

Principal Investigator ...

*Geoffrey Williams, M.D., Ph.D.
Department of Clinical and Social Psychology
Meliora Hall, RC Box 270266
University of Rochester
Rochester, NY 14627
tel. 716-275-0242 ; fax. 716-273-1100*

Background / Significance of Problem ...

Tobacco use and diet related to cholesterol contribute to over 700,000 premature deaths in the U.S. each year. Public Health Service Guidelines for Treatment of Tobacco Dependence assert that autonomy and its support is needed for effective treatment. However, autonomy has never been demonstrated to predict this change. Self-determination theorists hypothesize that perceived autonomy and perceived competence motivate abstinence from tobacco and adhering to diet to improve cholesterol. Because the diet outcomes are not yet available, this report will focus only on tobacco outcomes. This was a cessation induction trial (includes smokers whether they want to quit or not), in which participants were randomized to individual intensive treatment (based on SDT) or community care.

Research Question ...

To determine if constructs of self-determined motivation (autonomy, competence, and autonomy support from providers) mediate intensive tobacco dependence and dietary interventions and outcomes such as bio-chemically validated 7-day point prevalence cessation at 6 and 18 months and reduction in intake of percentage of dietary fat and total calories.

Findings To-Date ...

- Intention to treat analyses indicate the SDT intervention resulted in 11.8% six-month cotinine validated cessation versus 4.1% in community care ($p < .001$). Those receiving the SDT intervention had significantly greater increases in autonomy and perceived competence from baseline to 1 month (p 's $< .01$). In addition, participants receiving the SDT intervention perceived greater autonomy support than those in the community care condition ($p < .001$).
- At 6 months, more patients in the intervention reported having taken medication than did those in community care (31% vs. 16%). Of the 52% of patients not intending to quit at baseline, significantly more made a serious quit attempt (47% vs. 32%), used medications to quit (30% vs. 10%), and were abstinent at 6 months (9.8% vs. 3.7%), all differences significant at $p < .05$. Furthermore, autonomy support ($p < .001$), change in autonomy ($p < .05$), change in perceived competence ($p < .001$), and the use of medications ($p < .01$) all predicted 6-month cotinine validated cessation.

Implications ...

[for multibehavioral and multi-theoretical approaches to behavior change]

- [•] These findings confirm that patients autonomy and competence and providers autonomy support are important predictors of cessation within a self-determination theory based intensive intervention for tobacco dependence. This confirms their importance for the PHS guidelines.
- [•] Motivation for cessation, use of medications, serious quit attempts, and long-term abstinence were all significantly increased for those in the intensive intervention compared to smokers treated in the community. This was true whether the participants intended to quit smoking or not at the start of the trial. These findings have implications for extending tobacco interventions for all smokers, and suggest that the use of medications can be increased through autonomy supportive counseling about health benefits of cessation, and medication risks and benefits.

Future Research Directions ...

Future directions include using SDT constructs and clinical interventions to increase long-term adherence to lifestyle change and medication taking to improve a broad range of health care outcomes. These could include cardiovascular disease, cancers, diabetes, immunizations, and a variety of health related behaviors (wearing seat belts, using sun screen, flossing one's teeth, using condoms, etc.).